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REMARKS

Request for Reconsideration

Applicants have carefully considered the matters raised by the Examiner in the outstanding Office Action but remain of the position that patentable subject matter is present. Applicants respectfully request reconsideration of the Examiner's position based on the attached Declaration of Mr. Yoshizawa, Claim Amendments and the following remarks.

Claims Status

Claims 1, 3-21 are pending in this Application.

Claim 1 has been amended herein to more particularly point out and distinctly claim the photoconductor.

Claim 2 has been canceled.

Because of the cancellation of Claim 2, Claim 10 has been amended.

Claim 11 has been amended to correct an obvious typographical error.

Claim 21 has been added herein to emphasize that the exposure member exposes the organic photoconductor from outside of the organic photoconductor. Support for this newly claimed wording can be found in the paragraph bridging pages 32 and 33 and Figure 3 wherein it shows that exposure optical system 30 exposes the photoconductor 21 from the outside using reflective mirrors.

The Present Invention

The present Invention is directed to an organic photoconductor wherein the charge transport layer has a film thickness of 8 to 15 μm and a crossing angle of 70° or more measured between two tangential lines. As brought out in Tables 1A and 1B of the Application, having a film thickness outside the claimed range but a crossing angle within the claimed range, i.e. Photoconductors 1-A and 1-F, does not necessarily result in the present Invention. Photoconductors 1A and 1F should be compared to Photoconductors 1-B through 1-E. As shown in Table 1B, Photoreceptors 1A and 1F are inferior to Photoreceptors 1B through 1E. Thus, it is the combination of both the thickness of the charge transport layer and the crossing angle that results in the present Invention.

The Examiner's attention is also directed to Photoconductors 6 and 7 as shown in Table 1A. Both of these photoreceptors have a thickness within the claimed range but crossing angles outside the claimed range. As shown in Table 1B, Photoreceptors 6 and 7 perform poorly compared to Photoreceptors 1A through 1E.

Thus, it is the combination of the charge transport layer thickness and the crossing angle as recited in the claims that give the superior results obtained with the present Invention.

Rejection Under Section 112, second paragraph

Claims 1-20 had been rejected as being indefinite on the basis that Applicants seeking patent protection for all future organic CGM and all CTM and CTL of 8 to 15 μm . In accordance with MPEP 2173.04, the breadth of the claim is not to be equated with indefiniteness. It is submitted that the claims are clear and, especially Claim 1, in that Claim 1 calls for a photoconductor having a charge generating layer, a charge transport layer and a conductive base. The charge transport layer has to have a thickness of 8 to 15 μm and the photoconductor has to meet the crossing angle limitation of 70° or more.

As brought out above and, as noted in Tables 1A and 1B, merely having the claimed thickness or merely having the proper crossing angle does not result in the present Invention. To obtain the present Invention, one must obtain both the film thickness and the crossing angle. Thus, Applicants claims are rather narrow in that they claim a very specific thickness and specific crossing angle. Respectfully, the claims are not indefinite and one of skill in the art can clearly determine what is inside and what is outside the claimed range.

103 Rejection

Claims 1-20 have been rejected under 35 USC 103 as being unpatentable over either Sakon, Kinoshita or Shimada. The Examiner had taken the position that each one of the photoconductors taught in the three references will inherently meet the crossing angle limitation of the claims.

In order to address the Examiner's position, Mr. Yoshizawa has reviewed each one of the references and determined that Shimada is the closest of the references because Shimada teaches photoconductors having a charge transport layer with a thickness of 10 μm . The Examiner will recognize that 10 μm falls within the claimed range of 8 to 15 μm . On the other hand, both Sakon and Kinoshita specifically teach photoconductors

with charge transport layers outside of the claimed range. Thus, Mr. Yoshizawa prepared photoreceptors in accordance with the teachings of Shimada and tested them for their crossing angle. The results of these tests are reported in Table 4 under Paragraph 8 of Mr. Yoshizawa's Declaration.

As can be seen in Table 4, Photoconductors P-1-50, P-1-51, P-2-56 and P-2-57 were made and their crossing angles all fell below the claimed 70° or more.

Thus, Applicants have tested the closest prior art of Shimada and shown that Shimada does not inherently possess the claimed crossing angle limitation as recited in Claim 1.

It will also be noted that Shimada is silent with respect to the crossing angle of the charge transport layer. Thus, one of skill in the art, when reading Shimada, is not lead to the present Invention where the crossing angle is 70° or more.

Turning to Sakon, it will be noted that Sakon broadly teaches a charge transport layer of 8 to 22 μm but that, in the examples, specifically

paragraph 200, he teaches a charge transport layer of 18 μm . 18 μm is outside of the claimed range.

Furthermore, according to Mr. Yoshizawa's Declaration, since the protective layer of Shimada contains charge transport material, the protective layer of Shimada will also act as a charge transport layer. Thus, in Mr. Yoshizawa's opinion, the actual charge transport layer taught in Sakon, is 23 μm (18+5). Thus, the specific photoreceptors taught in Sakon are outside of the claimed range. Since the specific photoreceptors taught in Sakon are outside the claimed range, Mr. Yoshizawa determined that Sakon's photoreceptors are farther removed from the present Invention than the photoreceptor of Shimada.

In addition, it will be noted that Sakon is silent with respect to the crossing angle limitation. Given the fact that Shimada was determined to be closer to the present Invention than Sakon, it is respectfully submitted that Applicants have demonstrated that there is no likelihood that Sakon will have the crossing angle within the claimed range and, thus, Applicants have refuted the Examiner's prima facie case for Sakon inherently possessing the crossing angle limitation of the claims.

Kinoshita is also silent with respect to the crossing angle limitation. Kinoshita broadly teaches that the charge transport layer can have a thickness of 5 to 50 μm , see Column 38, line 67. However, Kinoshita specifically teaches that his charge transport layer has a thickness of 25 μm , see Column 43, line 33 and Column 44, line 26. Thus, the specific teachings of Kinoshita are directed to charge transport layers that fall outside of the claimed range. As noted by Mr. Yoshizawa, he deems that Kinoshita is farther removed from the present Invention than Shimada because the charge transport layer of Kinoshita is outside the claimed range.

Based on the showing in Mr. Yoshizawa's Declaration that the closer prior art of Shimada does not possess the claimed crossing angle, it is respectfully submitted that Applicants have refuted the Examiner's prima facie case of inherency with respect to the teachings of Kinoshita.

Moreover, with respect to all three references of Sakon, Kinoshita and Shimada, neither one of these three references teach the crossing angle as recited in the present Invention and, as noted above, it is the combination of both the crossing angle and the thickness of the charge transport layer that results in the present Invention. Merely having one of the other, as taught

by the Application in Tables 1A and 1B, one does not arrive at the photoconductor of the present Invention.

The Examiner is respectfully requested to consider the data in the Application, albeit, not Declaration data, for demonstrating the criticality of both the claimed charge transport layer thickness and crossing angle measurement. As the Examiner will appreciate, the tests that are reported in the Application were, in fact, run and those results were, in fact, obtained. Thus, it is submitted that the tests results as reported in Tables 1A and 1B of the Application demonstrate the criticality of both these limitations.

It is respectfully submitted that one of skill in the art, when viewing Sakon, Kinoshita and Shimada, is not lead to the present Invention and that the present Invention, as claimed, is patentable over the teachings of each one of these three references.

Conclusion

In view of the foregoing and the enclosed, it is respectfully submitted that the application is in condition for allowance and such action is respectfully requested. Should any extensions of time or fees be necessary in order to maintain this Application in pending condition, appropriate

requests are hereby made and authorization is given to debit Account # 02-2275.

Respectfully submitted,

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Encl: Executed Declaration of Mr. Hideo Yoshizawa signed on
October 11, 2006.